



## Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 12299 (1998): Dairy Whitener [FAD 19: Dairy Products and Equipment]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





BLANK PAGE



PROTECTED BY COPYRIGHT

भारतीय मानक  
डेयरी हाइटनर — विशिष्टि  
( पहला पुनरीक्षण )

*Indian Standard*

DAIRY WHITENER — SPECIFICATION

( *First Revision* )

ICS 67.100.01

© BIS 1998

BUREAU OF INDIAN STANDARDS  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Dairy Products and Equipment Sectional Committee had been approved by the Food and Agriculture Division Council.

This Indian Standard was first published in 1988 covering the requirement of dairy whitener, also known as sweetened partly skimmed milk powder. This standard has been revised to include the following changes/modifications:

- a) The product is required to be made only by spray drying,
- b) Requirements for milk solid (non-fat) and total ash have been modified,
- c) Requirement for ash insoluble in dilute hydrochloric acid has been added,
- d) Microbiological and packing requirements have been modified, and
- e) The referred standards have been updated and presentation has been harmonized.

While formulating this standard, due consideration has been given to the relevant rules prescribed by the Government of India under the *Prevention of Food Adulteration Act, 1954* and *Rules, 1955* and *Standards of Weights and Measures (Packaged Commodities) Rules, 1977*. This standard is, however, subject to the restrictions imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

**AMENDMENT NO. 1 NOVEMBER 2012  
TO  
IS 12299 : 1998 DAIRY WHITENER — SPECIFICATION**

*(First Revision)*

*(Page 1, Table 1, Sl No. (i), col 4) — Substitute 'IS 11623 for reference purpose and IS 16072 for routine purpose' for 'IS 11623'.*

*(Page 3, Annex A) — Insert the following at the end:*

<i>IS No.</i>	<i>Title</i>
16072 : 2012	Determination of moisture content in milk powder and similar products (Routine method).'

*Indian Standard***DAIRY WHITENER — SPECIFICATION***( First Revision )***1 SCOPE**

This standard prescribes the requirements, methods of sampling and test for dairy whitener also known as sweetened partly skimmed milk powder.

**2 REFERENCES**

The Indian Standards listed in Annex A contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated.

**3 TERMINOLOGY**

For the purpose of this standard, the following definition shall apply.

**3.1 Dairy Whitener (Sweetened Partly Skimmed Milk Powder)**

The product prepared by spray drying of cow milk, buffalo milk or a mixture thereof. The milk may be modified by partial removal/substitution of milk solids (non-fat) with carbohydrates such as sucrose, dextrose or dextrine.

**4 DESCRIPTION**

The product shall be white or light cream in colour, uniform in composition and free from lumps except those that break up readily under slight pressure and shall be reasonably free from scorched particles.

**5 REQUIREMENTS**

**5.1** The product shall be free from extraneous matters, added colours and flavours.

**5.2** The product may contain added calcium chloride, citric acid and sodium citrate, sodium salt of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 percent by mass of the finished product. Butylated hydroxyanisole (BHA) not exceeding 0.01 percent by mass of the finished product may be added. Such addition need not be declared on the label.

**5.2.1** Lecithin may also be added up to 0.5 percent. This shall be declared on the label.

**5.2.2** It may contain permitted stabilizers and emulsifiers.

**5.3** The flavour of the product or of the reconstituted milk shall be pleasant and sweet. It shall be free from off flavours. It may have slightly cooked but not the burnt flavour. It is recommended that the flavour and taste may be judged on the basis of their sensory characteristics (see IS 10030).

**5.4 Hygienic Conditions**

The material shall be manufactured and packed under hygienic conditions (see IS 2491).

**5.5 Microbiological Requirements**

**5.5.1** The colony count per gram of the product shall not be more than 40 000 when determined according to the method prescribed in IS 5402.

**5.5.2** Coliform count, *E.coli* and *Staphylococcus aureus* (coagulase-positive) when tested in accordance with the method given in IS 5401, IS 5887 (Part 1), and IS 5887 (Part 2), respectively shall be absent in 0.1 g.

**5.5.3** *Salmonella* when tested in accordance with the method given in IS 5887 (Part 3) shall be absent in 25 g.

**5.6** The product shall also conform to the requirements given in Table 1.

**Table 1 Requirements of Dairy Whitener**  
(Clause 5.6)

Sl No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Moisture, percent by mass, <i>Max</i>	4.0	IS 11623
ii)	Milk solids (non-fat), percent by mass, <i>Min</i>	57.0	see Note
iii)	Insolubility index, ml, <i>Max</i>	1.5	IS 12759
iv)	Total ash (on dry basis), percent by mass, <i>Max</i>	5.5	Annex B of IS 14433 (Part 1)
v)	Milk fat, percent by mass, <i>Min</i>	20.0	IS 11721
vi)	Acid insoluble ash, percent by mass, <i>Max</i>	0.1	Annex C of IS 14433 (Part 1)
vii)	Total added sugar (as sucrose), percent by mass, <i>Max</i>	18.0	Annex C of IS 4079

NOTE — Milk solids (non-fat) may be calculated by the formula: 100 — (moisture + fat + total added sugar).

## 6 PACKING AND MARKING

### 6.1 Packing

#### 6.1.1 Retail Packing

The product shall be packed in nitrogen or in a mixture of nitrogen and carbon dioxide. The product shall be packed in clean and sound metal containers (*see IS 11078*) or in a food grade flexible pack made from a film or combination of any of the substrates made of board, paper, polyethylene, polyester metallized film or aluminium foil in such a way so as to protect it from deterioration. In the case of the plastic material, only food grade plastic (*see IS 10171*) shall be used.

#### NOTES

1 For food grade plastic material, Rule 49(5) (v) of *Prevention of Food Adulteration Rules* should also be referred.

2 In the case of flexible pack, the following information shall be marked on the label:

'Once opened, the entire product content should immediately be placed in a clean air-tight container'.

**6.1.1.1** The product shall be packed in quantities as stipulated under the provisions of the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977*.

**6.1.1.2** Further encasing of individual retail packs may be carried out in bags/cartons of adequate strength as outlined in **6.1.2**.

#### 6.1.2 Bulk Packing

The product may be packed in quantities of 25 kg in bags of food grade polyethylene (*see IS 10171*) of minimum thickness 0.05 mm. The bags should be properly closed by tying with a string or a rubber band and shall be subsequently encased in any of the following:

- a) Sacks conforming to IS 11824, and
- b) Multi-walled kraft paper, such as crepe kraft paper bags of not less than 80 g/m<sup>2</sup> (GSM) grade lined with Hessian cloth having a mass of 270 g/m<sup>2</sup> (GSM) and having two inner layers of plain kraft paper of not less than 80 g/m<sup>2</sup> (GSM) grade.

### 6.2 Marking

The packages shall bear legibly and indelibly the following information:

- a) Name of the material and brand name, if any;
- b) Name and address of the manufacturer;
- c) Batch or code number;
- d) Month and year of manufacturing or packing;
- e) Net mass (*see 6.1.1.1*);
- f) Direction for storage;
- g) Best for consumption up to ... (month and year in capital letters);

OR

Best for consumption within .... months from the date of packaging/manufacture;

- h) Information given under Note 2 of **6.1.1**, if applicable;
- j) Lecithin content, percent by mass, if added;
- k) Direction for reconstitution;
- m) The content of this container on reconstitution as per direction has .... litre(s) of milk;
- n) Any other requirements under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977* and the *Prevention of Food Adulteration Act, 1954* and *Rules* framed thereunder.

#### 6.2.1 BIS Certification Marking

The product may also be marked with the Standard Mark.

**6.2.1.1** The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## 7 SAMPLING

Representative samples of the material shall be drawn and tested for conformity to this standard as prescribed in Annex B of IS 1165.

**ANNEX A**  
**(Clause 2)**  
**LIST OF REFERRED INDIAN STANDARDS**

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
1165 : 1992	Milk powder ( <i>fourth revision</i> )		Part 3 Isolation and identification of <i>SALMONELLA</i> and <i>SHIGELLA</i> ( <i>first revision</i> )
2491 : 1972	Code for hygienic conditions for food processing units ( <i>first revision</i> )	10030 : 1981	Method for sensory evaluation of milk powder
4079 : 1967	Canned <i>RASOGOLLA</i>	10171 : 1987	Guide on suitability of plastics for food packaging ( <i>first revision</i> )
5401 : 1969	Methods for detection and estimation of coliform bacteria in foodstuffs	11078 : 1984	Specification for round metal cans for milk powder
5402 : 1969	Method for plate count of bacteria in foodstuffs	11623 : 1986	Method for determination of moisture content in milk powder and similar products
5887 (Part 1) : 1976	Methods for detection of bacteria responsible for food poisoning : Part 1 Isolation, identification and enumeration of <i>ESCHERICHIA COLI</i> ( <i>first revision</i> )	11721 : 1986	Determination of fat content in milk powder and similar products
5887 (Part 2) : 1976	Methods for detection of bacteria responsible for food poisoning : Part 2 Isolation, identification and enumeration of <i>STAPHYLOCOCCUS AUREUS</i> and <i>faecal streptococci</i> ( <i>first revision</i> )	11824 : 1986	Paper coated high density polyethylene woven sacks for packing skimmed milk powder
5887 (Part 3) : 1970	Methods for detection of bacteria responsible for food poisoning :	12759 : 1989	Dried milk and dried milk products — Determination of insolubility index
		14433 (Part 1) : 1992	Infant milk substitutes: Part 1 Milk protein based

## **Bureau of Indian Standards**

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

## Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

## Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc : No. FAD 57 ( 889 ).

## **Amendments Issued Since Publication**

Amend No.	Date of Issue	Text Affected

## BUREAU OF INDIAN STANDARDS

**Headquarters:**

**Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110 002  
Telephones : 323 01 31, 323 33 75, 323 94 02**

**Telegrams : Manaksansthā**  
(Common to all offices)

### **Regional Offices :**

### Telephone

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg  
NEW DELHI 110 002

{ 323 76 17  
323 38 41

Eastern : 1/14 C. I.T. Scheme VII M, V. I. P. Road, Maniktola  
CALCUTTA 700 054

{ 337 84 99, 337 85 61  
337 86 26, 337 91 20

Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160 022

{ 60 38 43  
60 20 25

Southern : C. I. T. Campus, IV Cross Road, CHENNAI 600 113

{ 235 02 16, 235 04 42  
235 15 19, 235 23 15

Western : Manakalaya, E9 MIDC, Marol, Andheri (East)  
MUMBAI 400 093

{ 832 92 95, 832 78 58  
832 78 91 832 78 92

**Branches : AHMADABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR. LUCKNOW. NAGPUR. PATNA. PUNE. THIRUVANANTHAPURAM**